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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,467	07/11/2003	Brian V. Jenkins	7701	3252
49459	7590	12/22/2006		
NALCO COMPANY 1601 W. DIEHL ROAD NAPERVILLE, IL 60563-1198			EXAMINER JASTRZAB, KRISANNE MARIE	
			ART UNIT 1744	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/22/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/617,467

Applicant(s)

JENKINS ET AL.

Examiner

Krisanne Jastrzab

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/6/2006 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al., U.S. patent No. 6,762,832 B2 in view of Rao et al., U.S. patent No. 5,278,074.

Fisher et al., teaches the inclusion of a corrosion inhibitor, particularly an aromatic triazole such as benzotriazole and tolytriazole, in aqueous systems including treatment baths for copper—containing semiconductors or circuits. The concentration of corrosion inhibitor present is monitored by a UV spectroscopic system and feedback control is actuated based on the monitored concentration. Flow-through sample cells are provided at a plurality of locations in the aqueous system with pump and valve means being provided for the controlled introduction of fluids and corrosion inhibiting solutions based on the monitored concentrations. Sampling from the system can be performed continuously. Precise control of the desired concentration of the corrosion inhibitor is achieved with the monitoring and feedback control disclosed.

Rao et al., teach substituting a fluorometric monitoring system for spectroscopic systems used to monitor corrosion inhibitor concentrations in copper-containing aqueous systems, those inhibitors preferably including aromatic azoles such as benzotriazole and tolytriazole. Rao et al., teach that azoles are inherently fluorescent

and that a fluorescent monitoring system is more accurate and more effective than spectroscopic system whose radiation acts to degrade the corrosion inhibiting composition, and thus provides more accurately controlled dosing of the inhibitor.

Monitoring with the fluorescent system can occur either intermittently or continuously.

Rao et al., further teach the provision of a sidestream from the aqueous system being monitored and pump and valve means to actuate the responsive dosage control. See column 1, lines 11-51, column 5, line 55 through column 6, line 21 and column 11, lines 10-30.

It would have been obvious to one of ordinary skill in the art to substitute the fluorescent measurement/monitoring taught by Rao et al., for the spectroscopic monitoring in the corrosion control system of Fisher et al. and to apply the monitoring system to corrosion control in any aqueous fluid, including ultrapure, because the fluorescent system does not degrade the preferred corrosion inhibitors, and in fact, utilizes their inherent characteristics for more accurate concentration readings.

With respect to claims 4-6, both references teach application and monitoring of the inhibitor having concentration within the instantly claimed ranges. See column 11, lines 54-56 of Rao et al., and column 7, lines 50-55 of Fisher et al.

### ***Response to Arguments***

Applicant's arguments filed 10/6/2006 have been fully considered but they are not persuasive.

The declaration under 37 CFR 1.132 filed 10/6/2006 is insufficient to overcome the rejection of claims 1-21 based upon Fisher et al., in view of Rao et al., as set forth in

the last Office action because: the evidence and observations presented in the declaration do not differentiate from the evidence, observations and motivation explicitly taught in Rao et al. Applicant argues that the use of a fluorescent measurement system instead of a spectroscopic system in an ultrapure aqueous system as instantly claimed, was not obvious because it required extensive testing and that the light used in the spectroscopic system degrades the corrosion inhibiting azole. The Examiner would note that Rao et al., acknowledge and disclose the testing required as well as the exact drawbacks of the spectroscopic system as discussed in Applicant's declaration and instant specification. See column 1, line 65 through column 2, line 30, column 3, lines 25-63 and column 5, line 24 through column 6, line 27. The declaration fails to provide any parameters of an ultrapure that are not accounted for by the determinations set forth in Rao et al. The declaration further argues that high levels, such as 600 ppm, of triazoles required in microelectronic applications make monitoring difficult, and then also allege that very low dosages exist as well (less than 1ppm). The Examiner would point out that Rao et al., also teaches triazole doses covering 600 ppm and up to 1000 ppm or down to less than 1ppm. See Figs. 2 and 3.

The declaration further argues that the fluorescent monitoring would probably not have been possible without the new discovery of the xenon flash lamp, however, the instant specification lists several other effective lamps and the type of lamp is not instantly claimed, therefore this argument fails to provide any relevant background for patentability. See page 6, lines 20-25 of the instant specification.

The declaration also argues that the flow cell structure must be specialized for application with highly pure fluids, however, the Examiner would again point out that a specialized flow cell is not instantly claimed and would further assert that no such cell is disclosed in the instant disclosure.

Finally, the declaration fails to support the allegation of any special considerations required for the application to ultrapure fluids because all parameters raised in the declaration are addressed in the disclosure of Rao et al.

### ***Conclusion***

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

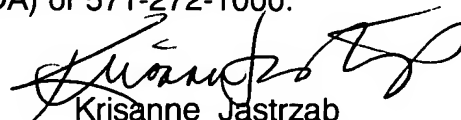
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krisanne Jastrzab whose telephone number is 571-272-1279. The examiner can normally be reached on Mon.-Thurs. 6:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Krisanne Jastrzab  
Primary Examiner  
Art Unit 1744

December 19, 2006